REMARKS

Present Status of the Application

This Office Action rejected all presently-pending claims 1-11. Specifically, the Office Action rejected claims 1, 2, 5 and 6 under 35 U.S.C. 102(b), as being anticipated by Pettey et al. (U.S. 6,067,590, hereafter Pettey). The Office Action also rejected claims 3 and 7 under 35 U.S.C. 103(a) as being unpatentable over Pettey, and further in view of US Patent Number 6,163,826 to Khan et al (hereafter Khan). The Office Action also rejected claims 4 and 8 under 35 U.S.C. 103(a) as being unpatentable over Pettey, and further in view of US Patent Number 6,507,879 to Sayles et al (hereafter Sayles). The Office Action rejected claims 9 and 10 under 35 U.S.C. 103(a), as being unpatentable over Pettey and Sayles. The Office Action rejected claim 11 under 35 U.S.C. 103(a), as being unpatentable over Pettey and Sayles, and further in view of Khan. Claims 5-8 are rejected under 35 U.S.C. 112, second paragraph. After entry of the foregoing amendments, claims 1-11 remain pending in the present application, and reconsideration of those claims is respectfully requested.

Discussion of Claim Rejections-35 U.S.C. 112, second paragraph

The applicant amended claim 5 to overcome this rejection. Applicants wish to clarify that the foregoing amendments have been made for purposes of better defining the invention in response to the rejections made under 35 U.S.C. § 112, second paragraph, and not in response to the rejections made based on prior art. Indeed, Applicants submit that no substantive limitations

have been added to the claims. Therefore, no prosecution history estoppel arises from this amendment. This Amendment is promptly filed to place the above-captioned case in condition for allowance. It is believed that the foregoing amendment on claim 5 add no new matter to the present application. Applicants believe that the amendment place the claims in condition for allowance. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

Response to Examiner's Reply and Discussion of Office Action Rejections-35 U.S.C. 102(b)

The Office Action rejected claims 1, 2, 5 and 6 under 35 U.S.C. 102(b), as being anticipated by Pettey. Thanks to the Examiner's reply in the final Office Action about the applicant's argument in the previous response. However, the applicant respectfully disagreed the rejection and the Examiner's reply for at least the reasons below.

First, a single line in a prior art reference should not be taken out of context and relied on with the benefit of hindsight to show obviousness, and one cannot choose among isolated disclosures in the prior art to deprecate the claimed invention. Please note that, Petty's Column 10, lines 1~67 and Column 11 lines 1~18 are described in a background of system initialization mode, not in normal operation mode, so there is no data transaction occurred on the bus of Petty. But, the Claim 1 of the application is inherently described in the background of normal operation mode after system initialization is completed because there are already data transactions on the bus. To understand why Petty stated "the configuration routine may provide control signals to the host-to-PCI bridge to change the bus speed to 66 MHz" in Column 11 Lines 10-15, please

refer to Column 10, Lines 61-67~Column 11, Lines 1~18, which said "registered agents operable at 66MHz only in register mode should treat M66EN as would a PCI 2.1 33 MHz bus agents" and "If a bus agent that meets 66MHz timing only in registered mode in installed on a 66 MHz bus, the pull-down resistor will force the bus to power up at 33 MHz." Therefore, it is clear that, during system booting in Petty, a 4-slot 66 MHz registered bus is defaulted to power up at 33 MHz, because whether the bus agent supports 66MHz registered mode is still unknown during that default setting. If all the bus agents are determined to support 66MHz registered mode, for a better system performance, the configuration software will "change" bus speed to 66 MHz. So, it is clear that the term "change" in Petty's Column 11, Lines 15 means to adjust the bus speed to an optimal, final-determined and maintained speed, rather than to "dynamic switch" which means the bus speed will be changed if needed.

Besides, in case of all the bus and all the bus agents supporting registered mode, the bus speed is set as 66 MHz, but Petty would not set bus speed at 33 MHz in this case, which means Petty does not disclose or teach "dynamic switch" because a dynamic switch implies to switch the bus speed between several transfer rates without limitation.

Furthermore, as known, based on the PCI Specification version 2.1, the speed of PCI 2.1 bus is fixed after system booting. Because Petty is conformed the PCI Specification version 2.1, it is obvious that Petty cannot teach away, and accordingly, the bus speed of Petty is fixed after system booting.

Furthermore, Petty disclosed a system bus speed configuration during initialization and accordingly, there is no data transaction during system initialization because the bus speed is not

determined yet. Therefore, Petty does not disclose a feature of "when the data transaction process is finished, the first control chip issuing a bus release connect command" of claim 1.

Furthermore, in Petty, the configuration routine only provides control signals to the "host-to-PCI bridge" to change bus speed, so Petty does not disclose a PCI-to-ISA bridge receiving the control signals for changing bus speed. But in claim 1, the first and second control chips both receive a transfer rate switching command.

Further, inherent anticipation requires that the missing descriptive material is "necessarily present," not merely probably or possibly present, in the prior art. It is clear that the configuration routine, not the host-to-PCI bridge, controls the speed change, so the host-to-PCI bridge will not issue a bus release connect command to the PCI-ISA bridge. Besides, in Petty, the bus speed is powered up from 33 MHz to 66 MHz by pulling up the M66EN pin from a ground potential to a voltage potential Vcc (column 10, lines 50~65). So, the host-to-PCI bridge and PCI-to-ISA bridge in Petty does not inherently enter disconnect and re-connecting states.

Thus, Pettey does not anticipate claim 1, and the rejection should be withdrawn.

If independent claim 1 is allowable over the prior art of record, then its dependent claim 2 is allowable as a matter of law, because this dependent claim contains all features/elements of independent claim 1. Additionally and notwithstanding the foregoing reasons for the allowability of claim 1, the dependent claim recites further features and/or combinations of features (as is apparent by examination of the claims themselves) that are patentably distinct from the prior art of record.

Regarding to claim 5, as discussed above, Petty disclosed a system bus speed configuration during initialization and accordingly, there is no data transaction during system initialization because the bus speed is not determined yet. Therefore, Petty does not disclose features of "receiving a transfer rate switching signal before data transfer on the bus between a first control chip and a second control chip is interrupted" and "dynamic switch" of claim 5.

If independent claim 5 is allowable over the prior art of record, then its dependent claim 6 is allowable as a matter of law, because the dependent claim contain all features/elements of its independent claim 5. Additionally and notwithstanding the foregoing reasons for the allowability of claim 5, the dependent claim recites further features and/or combinations of features (as is apparent by examination of the claims themselves) that are patentably distinct from the prior art of record.

Discussion of Office Action Rejections-35 U.S.C. 103(a)

The Office Action rejected claims 3 and 7 under 35 U.S.C. 103(a), as being unpatentable over Pettey, and further in view of Khan. The Office Action rejected claims 4 and 8 under 35 U.S.C. 103(a), as being unpatentable over Pettey, and further in view of Sayles. The Office Action rejected claims 9 and 10 under 35 U.S.C. 103(a), as being unpatentable over Pettey and Sayles. The Office Action rejected claim 11 under 35 U.S.C. 103(a), as being unpatentable over Pettey and Sayles, and further in view of Khan. Applicants respectfully traverse the rejections for at least the reasons set forth below.

In regarding claims 3 and 7, as discussed above, Petty does not disclose each and every feature of the independent claims 1 and 5, therefore, the combination of Petty and Khan does not disclose/suggest/teach every and each limitation of claims 3 and 7 and could not render them obvious. Further, please be advised that, Khan disclosed a feature of system clock speed programmable from 64 KHz to 8 MHz, not an 8 MHz interface, and a system clock speed has a different meaning from a north-bridge chip clock frequency. Besides, claim 3 does not mean to provide a full-duplex and half-duplex bidirectional communications to the attached devices. So, the combination of Petty and Khan does not teach the data transfer rate is switched between four times the north-bridge chip clock frequency and eight times the north-bridge chip clock frequency.

There would be no motivation for a skilled person to combine Pettey and Khan as proposed by the Examiner, as neither of the references explicitly suggests such a combination. In fact the only motivation for such a combination is provided by Applicants specification. For the reasons below, Applicants disagree with the Examiner's argument that a skilled person would have combined Pettey and Khan to allow the data transfer rate switched between four times the north-bridge chip clock frequency and eight times the north-bridge chip clock frequency.

Applicant respectfully submits that both Pettey and Khan fail to disclose, teach, or even suggest at least all limitations emphasized above. Therefore, no combination of the teachings of the two references could possibly result in the invention as recited in claims 3 and 7.

Regarding claims 4 and 8, although Sayles teaches command registers for setting the transfer rate of communication over the AGP bus, but in Sayles, one command register is inside

the AGP interface and other command registers are insides the graphics controllers (which are neither the north-bridge nor the sourth-bridge). Besides, the transfer rate over the AGP bus in Sayles is determined by what graphic controller supports, and the transfer rate over the AGP bus is fixed and cannot be hot switched. So, the combination of Petty and Sayles does not render claims 4 and 8 obvious.

Applicant respectfully submits that both Pettey and Sayles fail to disclose, teach, or even suggest at least all limitations emphasized above. Therefore, no combination of the teachings of the two references could possibly result in the invention as recited in claims 4 and 8.

With respect to claim 9, as discussed above, Petty does not disclose limitations of "data transaction" and "dynamic switch", and Sayles does not disclose storing the data transfer rate switch command into transfer rate registers of the first and second control chips. So, Applicant respectfully submits that the combination of Pettey and Sayles fails to disclose, teach, or even suggest at least all limitations emphasized above. Therefore, no combination of the teachings of the two references could possibly result in the invention as recited in claim 9.

If independent claim 9 is allowable over the prior art of record, then its dependent claim 10 is allowable as a matter of law, because the dependent claim contains all features/elements of the independent claim 9. Additionally and notwithstanding the foregoing reasons for the allowability of claim 9, the dependent claim 10 recites further features and/or combinations of features (as is apparent by examination of the claims themselves) that are patentably distinct from the prior art of record.

Regarding Claim 11, as above discussion, Pettey and Sayles do not teach limitations in Claim 10, and Khan's programmable system clock is different from the north-bridge chip clock. So, Applicant respectfully submits that Pettey, Sayles and Khan fail to disclose, teach, or even suggest at least all limitations emphasized above. Therefore, no combination of the teachings of the references could possibly result in the invention as recited in claim 11.

CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims 1-11 are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Respectfully submitted,
J.C. PATENTS

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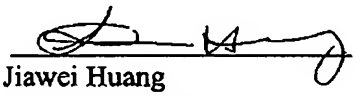

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